**The Power of Music**

Music…the agent needed to spark a chemical reaction to release something called happiness, or more scientifically…dopamine. Music has become a major part in Chemotherapy centres and even in the Pregnancy wards. When slow and melodious music is played, it lowers the blood pressure thus slowing down the heartbeat allowing us to breathe normally and to calm the nerves. It has been proven that music can reduce the music tension that builds up around the different parts of our body including the back, neck, stomach and shoulders. More importantly, music drastically works on lowering psychological tension from our mind. Listening to music helps to reduce mental and physical stress and is highly employed in the health industry to relax and keep the patients calm.

Several studies have been conducted proving the use for music in one’s life. Did you know that when musicians play their instruments, there are fireworks happening inside their brain? Of course, on the outside they may look calm and focused while reading their music and playing their instrument, but inside their brain, there is a party going on.

Over the last few decades, neuroscientists have made massive breakthroughs in understanding how our brains work by monitoring them in real time with machines like FMRI and PET scanners. When people are hooked up to these scanners while reading or solving math problems, their activity can all be observed in corresponding areas of the brain, but when researchers asked participants to listen to music while hooked on these machines, they saw fireworks. Multiple areas of their brains were lighting up at once as they processed the sound, took it apart to understanding elements like melody, harmony, timbre and rhythm and then put them back together into a unified musical experience.

Researchers then compared the brains of music listeners to those of musicians, the little backyard fireworks became a festival. It turns out that while listening to music engages the brain, playing music is the brains equivalent to a full-body workout. The neuroscientists saw multiple areas of the brain light up simultaneously processing different information in intricate, interrelated and astonishing fast sequences. What does this mean? Well, playing a musical instrument engages every area of the brain at once, specifically the visual, auditory and motor cortices. As with any other workout, disciplined, structured practice in playing music strengthens those brain functions allowing us to apply that strength in other activities.

The most obvious difference between playing music and listening to it is that the other requires fine motor skills, which are controlled in both hemispheres of the brain. It also combines the linguistic and mathematical accuracy, in which the left hemisphere is more involved with the creative content that the right excels in. For these reasons, playing music has been found to increase the volume and activity in the brain allowing messages to travel across the brain faster and through more diverse routes. Yes, this can potentially mean that musicians can solve problems more effectively and creatively, in both academic and social settings.

Music is also known to help patients diagnosed with *Alzheimer’s* to remember certain things. I personally had an experience with my grandma who was diagnosed a couple years back. It was Christmas time, and I was playing some Christmas carols on the piano with my grandma seated on the couch. To my amazement, she started humming the melody to one of the songs. This was unbelievable considering a woman who can’t even remember her own name.

Music is a beautiful form of expression. It is that form of art that evolves continuously. Everyone has some form of passion towards music within them, either in the form of a desire to learn or listening for relaxation. To me music is life, and I have a strong desire to learn music in the future.